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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,841	01/31/2001	Christos Karamanolis	10008124-1	6264

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

BOUTAH, ALINA A

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,841

Applicant(s)

KARAMANOLIS ET AL.

Examiner

Alina N Boutah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 16-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment filed February 11, 2005. Claims 1-7 and 16-25 are pending in the present application.

Election/Restrictions

Applicant's election without traverse of claims 1-7 and 16-25 in the reply filed on February 11, 2005 is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,212,640 issued to Abdelnur et al. (hereinafter Abdelnur) in view of USPN 6,493,768 issued to Boutcher.

Regarding claim 1, Abdelnur teaches a file interface arrangement for providing remote file access to a data processing system via a network, the data processing system including a system input/output bus, the file interface arrangement comprising:

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a bus-interface circuit arranged to interface with the system input/output bus (figure 7: 718);

a processor arrangement coupled to the bus-interface circuit (figure 7: 713);

a memory coupled to the processor arrangement, the memory configured with program code that is executable by the processor arrangement and that implements a standard NFS client protocol, and a network protocol stack (figure 7: 715); and

a network-interface circuit arrangement coupled to the processor arrangement and arranged to send data received from the processor over the network and receive data via the network (figure 7: 720).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 2, Addelnur teaches the arrangement of claim 1, wherein the data processing system includes an operating system and hosts an NFS client application, the arrangement further comprising an interceptor module coupled to the operating system and to the system bus, the interceptor module configured and arranged to intercept NFS-client calls from

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the NFS client application and send NFS-client calls to the processor arrangement via the system bus (figure 2; col. 6, lines 22-59).

Regarding claim 3, Boutcher teaches the arrangement of claim 2, wherein the operating system includes a message stream and the interceptor module is configured and arranged to intercept NFS messages from a message stream of the operating system (col. 6, line 30-45).

Regarding claim 4, Boutcher teaches the interface arrangement of claim 3, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 5, Abdelnur teaches the arrangement of claim 2, wherein the operating system includes an RPC software layer, and the interceptor module is configured and arranged to intercept packets from the RPC layer of the operating system (col. 6, lines 40-59).

Regarding claim 6, Boutcher teaches the interface arrangement of claim 5, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 7, Boutcher teaches the interface arrangement of claim 4, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

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Regarding claim 16, Abdelnur teaches a file interface card, comprising:

a substrate having connectors for removably coupling to a system input/output bus of a data processing system (figure 7);

at least one integrated circuit arrangement disposed on the substrate and coupled to the connectors, the at least one integrated circuit arrangement including, a bus-interface circuit arranged to interface with the system input/output bus (figure 7:718);

a processor arrangement coupled to the bus-interface circuit (figure 7:713);

a memory coupled to the processor arrangement, the memory configured with program code that is executable by the processor arrangement and that implements a standard NFS client protocol responsive to an NFS client application executing on the data processing system and a network protocol stack (figure 7: 715); and

a network-interface circuit arrangement coupled to the processor arrangement and arranged to send data received from the processor over the network and receive data via the network (figure 7: 720).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

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Regarding claim 17, Boutcher teaches the file interface card of claim 16, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 18, Abdelnur teaches a data processing system, comprising:

a first processor configured to execute an operating system and an NFS client application (figure 7: 713);

a system input/output (I/O) bus coupled to the processor (figure 7:719);

a network interface card coupled to the system I/O bus, the network interface card arranged to send data received from the first processor over a network and receive data via the network (figure 7: 720); and

a file interface card coupled to the system I/O bus, wherein the file interface card implements a standard NFS client protocol responsive to the NFS client application executing on the first processor, and is adapted to send NFS requests over the network and receive NFS data via the network (figure 7: 720).

However, Abdelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

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Regarding claim 19, Abdelnur teaches wherein the file interface card comprises:

a bus-interface circuit arranged to interface with the system input/output bus (figure 7: 719);

a second processor coupled to the bus-interface circuit (figure 7: 713);

a memory coupled to the processor arrangement, the memory configured with program code that is executable by the second processor and that implements the standard NFS client protocol and the network protocol stack (figure 7: 715); and

a network-interface circuit arrangement coupled to the processor arrangement and arranged to send data received from the second processor over the network and receive data via the network (figure 7: 720).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 20, Abdelnur teaches the system of claim 17, further comprising an interceptor module coupled to the operating system and to the system bus, the interceptor module configured and arranged to intercept NFS-client calls from the NFS client application and send NFS-client calls to the second processor via the system bus (figure 2; col. 6, lines 22-59).

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Regarding claim 21, Boutcher teaches the system of claim 20, wherein the operating system includes a message stream and the interceptor module is configured and arranged to intercept NFS messages from a message stream of the operating system (col. 6, line 30-45).

Regarding claim 22, Boutcher teaches the system of claim 21, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 23, Abdelnur teaches the arrangement of claim 20, wherein the operating system includes an RPC software layer, and the interceptor module is configured and arranged to intercept packets from the RPC layer of the operating system (figure 2; col. 6, lines 22-59).

Regarding claim 24, Boutcher teaches the interface arrangement of claim 23, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 25, Boutcher teaches the interface arrangement of claim 19, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a metadata server (figure 4).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANB

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William C. Vaughn, Jr.
WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER